

THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY.

[SEVENTH SERIES.]

No. 42. JUNE 1901.

LXII.—*New Genera and Species of Eastern and Australian Moths.* By Colonel C. SWINHOE, M.A., F.L.S., &c.

[Continued from p. 473.]

Family *Sarothripidæ*.

Gadirtha sara, nov.

♂. Palpi ochreous white, brown at the sides, terminal joint speckled with brown and with a brown band at the tip; head, body, and fore wings pinkish grey, irrorated with brown atoms, the irrorations on the fore wings very dense in parts, forming brown indistinct patches, making the wing look variegated; a very indistinct interior line, of which only a very acute angle near the hinder margin is distinct, the orbicular represented by a black spot, the reniform a brown ring with a small pale ringed spot in its centre; an outwardly rounded double discal brown line with pale centre, the outer one with three or four teeth; a whitish smear at the apex, bordered by a blackish dentate line; a pale submarginal line, dividing the black veins, a black marginal line, and ochreous cilia, interlined with brown: hind wings with broad brown marginal border and ochreous cilia: underside whitish, fore wings with broad marginal border suffused greyish.

Expanse of wings $1\frac{4}{5}$ inch.

Talaut (*Doherty*).

Blenina effusa, nov.

♀. Body and fore wings pinkish grey, smeared with grey; a brown, highly sinuous, thick line from costa before the middle to hinder margin beyond the middle, a black spot at end of cell, and some blackish markings near its inner side; a similar line from costa beyond the middle to the hinder margin close to the first line, sinuous and well curved outwardly; two indistinct sinuous lines between this and the margin, the outer one with some blackish spear-shaped marks; cilia yellow, with brown patches opposite the veins; hind wings pale pink, cilia yellow: underside, fore wings pale pink, hind wings pale ochreous, nearly white, without markings except for some yellow and brown suffused patches on costa and apical portions of fore wings; cilia as above.

Expanse of wings 1 inch.

Pulo Laut (*Doherty*), Lewas (*Everett*).

Clettharra iphida, nov.

♂. Head, thorax, and fore wings dark pink-brown; a broad nearly white band along the costa, containing blackish streaks and marks on the outer half; a whitish band on the hinder margin from base to one third from the angle; cilia white, with brown patches; abdomen and hind wings white: underside white; fore wings suffused with grey; some small blackish-brown marks on costa near apex.

Expanse of wings $\frac{9}{10}$ inch.

Jaintia Hills.

Allied to *C. albonotata*, Hmps., but that species has white spots on the outer margin.

Clettharra floccifera.

Clettharra floccifera, Hmps. Moths Ind. ii. p. 386. ♂ (1894).

Clettharra valida, Hmps. (nec Walker), l. c. iv. p. 528 (1896).

The types of *C. floccifera*, Hmps., from Tenasserim and the Nagas, are males; the type of *C. valida*, Walker, from Sarawak, is a female; and Sir George Hampson very naturally came to the conclusion that they were sexes of the same species; but I have in my collection males of both forms and a female of *C. floccifera*; the sexes are alike; the two forms are undoubtedly quite distinct.

Tenasserim, Nagas, Khasia Hills.

Sarothripa morena, nov.

♀. Frons and palpi white, last joint brown; head, body,

and fore wings dark purple-grey; a small pale pinkish space at end of cell; a whitish patch in the middle of hinder margin, somewhat triangular, with the point inwards; the entire wing of different shades of grey; a black dot in the cell, another at the end, two beyond it, included in a circular row of whitish points which extend from the costa, round the cell, nearly to the whitish patch on the hinder margin; some whitish points on costa near apex; a row of submarginal black points and marginal whitish points: hind wings grey; cilia of both wings whitish grey; underside uniform pale grey, without markings.

Expanse of wings 1 inch.

Sarawak, Borneo.

Allied to *S. chlorana*, Hmps., from Sikkim and the Khasia Hills; there is one example from Borneo in the B. M. amongst the *Stictoptera*, in *Quadrifidæ*, drawer no. 206, and another from Perak with *Plotheia metaspilella*.

Family Stictopteridæ.

Genus VIZAGA, nov.

Palpi upturned, smooth, third joint two thirds length of second; abdomen smooth, extending a little beyond the hind wings; antennæ in the male very minutely ciliated, about two thirds the length of the body; mid tibiæ with one long and one short terminal spur, hind tibia with two pairs, the outer ones short: fore wings increasing in width to outer margin, apex blunt, hind margin nearly as long as the costal margin, the wing rather short, no raised tufts, retinaculum bar-shaped; the end of the cell in the male rather distorted, with two patches of rubbed membrane on the underside, indicated above by two short semihyaline streaks, the lower portion of the discoidal vein produced into an acute angle, its middle portion concave, vein 2 from close to lower end, 3 from the end, 4 and 5 commence close together from the produced angle, 6 and 7 from upper end of cell, the latter bent and forming the lower side of a six-sided areole, 8 and 9 on a stalk from the outer angle of the areole, 10 from two thirds, forming the upperside of the areole: hind wings with veins 3 and 4 stalked, 5 from near lower end of cell.

Type ♀. (*Ophiusa?*) *cyanea*, Snellen, Tijds. voor Ent. xxiv. p. 129, pl. xiv. fig. 2 (1881). Type ♀, Luzon.

I have the female also from Malang, Java; and the Hon. Walter Rothschild has very kindly lent me a male from Samba. It has many affinities to the genus *Mucedæ*, Walker.

Gyrtona nama, nov.

♂. Palpi dark brown, with white tips; head, body, and fore wings dark brown, with a greyish tinge; a white streak between the antennæ and along the frontal tuft; some white scales on the thorax: fore wings with indications of many very indistinct and very fine sinuous transverse lines, the reniform dotted with white; a black spot below the middle of cell; a band composed of two lines rather close together from the costa near apex, which bends abruptly opposite end of cell, and then runs nearly straight to hinder margin beyond the middle; the inner side of this band is marked with deep black spots above the bend and on its outer side with two white lunules and a white spot; at the apex of the wing is a white streak edged with deep black, composed of three conjoined elongated spots; a deep black spot on the grey cilia below the apex, three white costal subapical dots and white marginal points: hind wings grey, with broad brown marginal border; cilia of both wings interlined, on the hind wings tipped with white.

Expanse of wings $1\frac{2}{10}$ inch.

Jaintia Hills.

There is an example of this species in the B. M. from Bhutan mixed up with *Stictoptera albodentata*, Moore.

Family **Gonopteridæ**.*Capotena elaina*, nov.

♂ ♀. Head, thorax, and fore wings chestnut-red, more or less suffused with brown; two pale transverse lines—first from costa near base, straight to middle of hinder margin, the other from costa one third from apex to the hinder margin, curving slightly outwards; a pale line at base of cilia: hind wings white, sometimes with blackish suffusions, otherwise without markings; abdomen brown, so thickly covered with white pile in the female as to make it look white, with an orange-grey apical tuft in the male: underside, fore wings pale red, white at base of costa and broadly so on hinder margin; pectus, body, and legs white, covered with thick white hairs.

Expanse of wings $1\frac{7}{10}$ inch.

Queensland.

Curea tarika, nov.

♂. Head, body, and fore wings dark pinkish grey, irradiated with red-brown; some brown dots at base, one in the

cell, and a brown spot at the end; some brown marks at the base, a broad antemedial brown band with irregular edges from costa before the middle to the centre of hinder margin, a marginal pinkish-white band with sinuous inner margin; on the inner side of this band on the costa near the apex is a broad brown patch which diffusely narrows downwards; cilia dark brown: hind wings orange, whitish on costa, without markings; cilia concolorous: underside, body, legs, and wings uniform dull orange, suffused slightly in parts with grey; a whitish subapical costal patch on fore wings.

Expanse of wings $1\frac{4}{10}$ inch.

Gilolo (*Doherty*).

Intermediate between *C. ocyra*, Swinh., from Singapore, and *C. nitida*, Hmps.

Genus ERIZADA, Walker.

Erizada, Walker, xxxii. p. 506 (1865).

Tinosoma, Hmps. Moths Ind. ii. p. 426 (1894).

Erizada semifervens.

Gadirtha (?) *semifervens*, Walker, Journ. Linn. Soc. vii. p. 163 (1864).

Erizada lichenaria, Walker, xxxii. 506 (1865).

Tinosoma hyperythrum, Hmps. l. c.

Andaman Islands.

Also from the Naga Hills and from Sarawak, Borneo.

Family Trifidæ.

Aucha vesta, nov.

♂. Antennæ dull red; palpi dark brown; head, thorax, and fore wings olive-grey, tinged with ochreous; orbicular represented by a black spot and the reniform by two black spots, one above the other, both ringed with grey; a submarginal sinuous grey thin band; a similar antemedial band running close on the inner side of the orbicular; the bands are erect and the latter is more than sinuous, almost dentated; then follows a broad dark brown band, its outer edge running through the reniform; the inner portions of the wing are almost as dark as the brown band, the outer portions much lighter, almost grey; with several subdentate pale grey thin bands and a submarginal dark brown band, the inner edge of which is diffuse, the outer edge toothed throughout, the largest teeth being a little below the costa and in the middle: hind wings with two broad orange-ochreous longitudinal interior streaks, the costa and outer margin broadly blackish

brown, the abdominal marginal space ochreous, clouded with brown; a brown spot at the end of cell; cilia bright orange-yellow: underside dull brownish grey; fore wings with the hinder margin ochreous; hind wings with the inner streaks and abdominal space dull ochreous.

Expanse of wings $1\frac{4}{10}$ inch.

Coomoo, Queensland.

In one example the broad central brown band on the fore wing stops halfway and leaves an ochreous space on the costa.

Hadena amanda, nov.

♂. Head, thorax, and fore wings dark olive-brown; palpi black at the outer sides: fore wings with some pale pinkish dots on the costa towards the apex; three very indistinct sinuous transverse bands, brown, with pale pinkish inner edges; orbicular large, indistinct; reniform large, ear-shaped, and nearly white, with brown interlining, two pale pinkish spots just beyond it: hind wings grey, pale in the interior and whitish towards base; abdomen grey; apical tuft dull red.

Expanse of wings $1\frac{6}{10}$ inch.

Perak.

Easily distinguishable by the double pinkish spots beyond the stigma.

Semiophora eriza, nov.

♀. Of a uniform ochreous grey, slightly tinged with pink: fore wings with orbicular indicated by a black oblique spot, the reniform by a black V-shaped mark; a discal submarginal pale line, rather far from the margin, slightly sinuous and marked and spotted in places with black; grey marginal dots: hind wings unmarked; cilia of both wings with a pale basal line: underside paler; hind wings whitish; a brown discal dot.

Expanse of wings $1\frac{7}{10}$ inch.

Kulu (*Graham Young*).

Allied to *S. carnipennis*, Butler, from Japan.

Elusa semiptecten, nov.

♂ ♀. Palpi with the second joint brown, the third paler and ochreous red; head, body, and fore wings dark brown, with a bronzy gloss; orbicular represented by a white dot ringed with black, the reniform by two spots, one above the other, also ringed with black; these spots in some specimens are snow-white, in others brown; indications of three trans-

verse, outwardly curved, sinuous brown lines—antemedial, postmedial, and submarginal—the last in some examples with two or three black dots towards costa: hind wings brown, with a whitish cilia: underside pale brown; hind wings with a cell-spot and pale internally; body and legs with a red tinge.

Expanse of wings $\frac{9}{16}$ inch.

Queensland.

Superficially like *Penza puncticeps*, Wlk. The type of the genus *Elusa* is *aneusalis*, Wlk., from Sarawak, which has a large boss of black scales at the bend in the antennæ of the male, beyond which the antennæ are unipectinate; *E. bipars*, Moore, and *E. antennata*, Moore, agree therein; *Penza puncticeps*, Walker, from Borneo, has shortly bipectinate antennæ in the male from base onwards; in the male antennæ *E. semipecten* agrees with typical *Elusa*, except that the boss of scales is wanting, there being merely a thickening at the bend.

Caradrina hennia, nov.

♂ ♀. Head, body, and fore wings fawn-colour, some white scales on the head at the base of the antennæ; a white line at the base of the cilia, otherwise absolutely without markings: hind wings white, slightly tinged with reddish grey on costal and outer margins; a white line at base of cilia, as in fore wings: underside paler; hind wings with silvery scales.

Expanse of wings $\frac{9}{16}$ inch.

Sarawak, Borneo.

In the B. M. unnamed. I have it also from Calcutta.

Family Quadrifidæ.

Subfamily POLYDESMINÆ.

Pandesma pagana, nov.

♂. Palpi dark brown; body and wings of a uniform pale purplish brown, with a slight ochreous suffusion: fore wings with a black suffused basal patch, a large blackish, almost square patch on middle of costa, and another with rounded lower edge before the apex; the whole costal margin marked and spotted with black; a very indistinct sinuous, transverse, brown medial line in continuation of the outer edge of the medial patch, and another similar line just beyond it: hind wings pale at the base, with a large blackish patch in the centre before the middle and traces of an indistinct sinuous discal line; marginal festoon of both wings brown, with brown points: underside brownish grey; fore wings with a

brown lunule at end of cell; hind wings with a similar lunular mark and a spot below it.

Expanse of wings $1\frac{5}{10}$ inch.

Jaintia Hills.

Belongs to Hampson's Section 1 A. b^1 , mid legs with a tuft of long hair from the femoro-tibial joint, and is allied to *P. costalis*, Moore.

There is an example from Sikkim in the B. M. without name (Quadridæ, drawer no. 226).

Subfamily *OPHIUSINÆ*.

Bocula erota, nov.

♀. Palpi, head, thorax, and fore wings dark yellow, tinged with bronze, and irrorated with very minute grey atoms; a prominent blackish spot at end of cell; a very broad brownish-black marginal band, its inner edge running straight up from the hinder margin near the angle, ending opposite the upper angle of the cell, where it abruptly bends and is irregularly sinuous to the apex of the wing; an indication of a thin grey band in the disc, close to the inner side of the broad marginal band; marginal points black, with yellow dots: hind wings dark ochreous brown, without markings: underside uniform dark grey-brown; hind wings with a cell-spot; both wings with marginal ochreous points.

Expanse of wings $1\frac{3}{10}$ inch.

Port Blair, Andamans.

Allied to *B. punctilineata*, Hmps. n.; the marginal band is much broader and differently shaped and the discal row of black dots is wanting. I have received several examples, all females.

Motina shumara, nov.

♂ ♀. Pale ochreous pink; palpi dark red below: fore wings irrorated with red, a brown cell-spot, and crossed by many straight red-grey bands, two antemedial indistinct, two postmedial, both rather close together; several before the margin very close together, broadly shading the marginal space: hind wings paler, with three indistinct discal bands, most apparent towards the abdominal margin; both wings with minute black marginal lunules and pale-tipped reddish cilia: underside pale pinkish, without any markings.

Expanse of wings $1\frac{9}{10}$ inch.

Sarawak, Borneo.

Hardly any variation in the long series before me; there are two examples from Borneo in the B. M. unnamed (Quadridæ, drawer no. 127).

Genus TIRUVACA, nov.

♂. Fore wings narrower than hind wings, of uniform width throughout; costa straight, becoming convex shortly before apex, which is slightly subfalcate; outer margin oblique, subsinuous, hinder angle obtuse; hinder margin strongly convex on basal half: hind wings ample, outer margin well rounded; apical and anal angles both well marked; antennæ slender, minutely subserrate and pubescent; palpi with second and third joints erect in front of face, laterally flattened, the second joint with a tuft of hairs at apex on upperside projecting over the third; tongue and frenulum present; femora and tibiæ densely hairy; hind tibiæ with four long sharp spurs.

Fore wing with the cell half as long as the wing; discocellular concave; veins 1 to 5, the median vein itself, and the submedian fold all distorted and sinuous; vein 2 from just beyond middle of cell, bent downwards and closely approximated to submedian fold in its outer half; vein 3 from three fourths of cell, approximated at first to the median, then curved downwards; veins 4 and 5 from lower end of cell, co-sinuous at first, then divergent; the median vein itself thickened and bent downwards before end of cell; 6 from upper angle, 7 and 8 stalked from upper angle, 9 and 10 stalked from three fourths, 9 soon anastomosing with 7 and 8; 11 free, but closely approximated to 10; basal half of cell clothed with downy hairs; wing-membrane between median vein and submedian fold fluted and without scales.

Hind wing with the cell short; costal well separated from subcostal; veins 6 and 7 from upper angle of cell; 3, 4, and 5 close together from lower angle.

♀. With the fore wings triangular and the veins normal. The male is coloured and marked like the female, but the apex of the fore wing is more produced.

Type *Tiruvaca (Thermesia) subcostalis*, Walker, xxxiii. p. 1059.

The type specimen (a female) came from Moulmein. Kiriwini, Trobriand Island.

Platyja minutipuncta, nov.

♂ ♀. Dark olive-brown; palpi nearly black, with yellow tips; antennæ yellow at the base; spots and dots on the wings pale grey: fore wings with a subcostal round spot a little beyond the middle, a large spot in the lower disc, several dots in the interior, a discal row of dots across both wings, obsolete towards costa of hind wings, and a marginal row of

grey points; cilia white: the underside is browner and less olive, the wings without markings except for the discal row of dots, obsolete on the fore wings in the male, distinct and complete on both wings in the female.

Expanse of wings $2\frac{4}{10}$ inches.

♂. Singapore. In B. M.

♀. Jaintia Hills.

Family Focillidæ.

Zethes multiplaga, nov.

♀. Of a uniform ochreous grey, with brown irrorations; last joint of palpi with a black band at the tip: fore wing with two large green-black spots—first at costal fifth, with some red-brown scales beneath it, a sinuous pale line on each side, which circles round the spot at the costal edge, forming all together a subbasal band; the second is at the end of cell, a black dot in the middle, a pale medial red-brown band, more or less double, straight across the wing, except where it courses round the large cell-spot; a discal straight band, which is green-black, from below the costa to vein 5, crossed by the whitish veins, and a whitish transverse line down the black centre, some black and white costal marks: hind wing with a large green-black spot at lower end of cell, two near anal angle, and a medial double grey line touching the inner side of the large cell-spot; both wings with a submarginal highly sinuous band, the space from this to the outer margin darker than the rest of the wings; small black lunules close to the margin and grey cilia with pale basal line: underside grey; fore wings tinged with pale red, small cell-spots; a medial sinuous reddish line across both wings; a broad blackish band, smeared with greyish, and black lunules near outer margin as above.

Expanse of wings $1\frac{1}{2}$ inch.

Jaintia Hills.

Egnasia costalis.

Acharya costalis, Moore, P. Z. S. 1883, p. 28, pl. vi. fig. 10, ♂.

The type specimen is a male from the Andamans. I have now the other sex; it is in general coloration and in the disposition of the markings similar to the male, but the costal band of fore wings and the discal line of both wings are purplish black, instead of being ochreous white as in the male.

Port Blair, Andaman Island.

Diomea diffusifascia, nov.

♂. Palpi dark blackish brown, ochreous on the inner sides and at the tips of terminal joints; head, body, and wings of a uniform dark blackish brown, tinged with pink; some white marks on costa; four white points towards apex; a broad pinkish-grey diffused band, narrow towards costa, broadening downward to the hinder angle, covering nearly its outer half, the band containing a whitish angulated transverse line and many brownish marks and suffusions; some grey marks near apex, indicating a submarginal band, also slightly indicated on the hind wings, which are otherwise without markings; both wings with black marginal spots and black marginal line; cilia of fore wings brown with ochreous spots, of hind wings brown with ochreous tips: underside nearly black; fore wings with the discal band white and pure; apical portion blackish grey.

Expanse of wings $1\frac{1}{10}$ inch.

Sarawak, Borneo.

There is an example of this species in the B. M. from Borneo unnamed.

Diomea almana, nov.

♀. Palpi ochreous, a black band above at end of second joint, a black stripe above along terminal joint; head, thorax, and abdomen pinkish brown, with grey markings: fore wings with nearly the entire inner space smeared with pinkish grey, due to the thinness of the scaling; thicker scales at the base, along the costal apex and outer marginal portions dark pink-brown, forming the commencement of transverse bands divided by pinkish-grey lines, and the commencement of two white bands indicated on the costal third and two thirds by white marks; marginal line black, slightly running in on the veins: hind wings pink-brown, with several blackish-brown transverse bands; a black central angulated line, broadly suffused with white on the outer side; a blackish marginal band, with a broad white suffusion running through it; a marginal black festoon; cilia of both wings ochreous, with brown patches: underside uniform pale grey, with indications of a central transverse band.

Expanse of wings $1\frac{2}{10}$ inch.

Sarawak, Borneo.

Diomea lichenosa, Hmps., has a similarly smeared space on fore wings, but the markings are quite different.

Genus RHESALA, Walker.

Rhesala, Walker, xv. p. 1776 (1858).

Enea, Walker, Journ. Linn. Soc. vii. p. 65 (1864).

Daona, Walker, *ibid.* p. 190.

Tescisa, Walker, *ibid.* p. 191.

Raparna, Moore, Deser. Ind. Lep. Atk. p. 177 (1882).

Hingula, Moore, *ibid.* p. 180.

Byturna, Moore, P. Z. S. 1883, p. 28.

Rhesala mansueta.

Daona mansueta, Walker, Journ. Linn. Soc. vii. p. 190.

Byturna rufifascia, Hmps. Ill. Het. B. M. viii. p. 100, pl. cxlviii. fig. 6 (1892).

Raparna digramma, Hmps. Moths Ind. iii. p. 24 (1895).

Xanthoptera mansueta, Swinh. Cat. Het. Mus. Oxon, ii. p. 57 (1900).

Sarawak, Borneo. Also from the Nilgiri Hills.

Sir George Hampson has put this form as one of the synonyms of the common Indian *Rhesala digramma*, Walker; but it is a good form and very constant. I have some fine specimens now from Sarawak, and am able to properly determine it; the type specimen is old and badly set, and would not bear much handling. I have three examples from the Nilgiri Hills; they are slightly larger, but otherwise identical.

Rhesala asphalta, nov.

♂. Ochreous brown, both wings crossed by many very fine brown striations; orbicular round, reniform ear-shaped, both pale-ringed; transverse lines dark brown, indistinct—first antemedial, nearly erect; second postmedial, from centre of hinder margin, outwardly oblique and sinuous, curving round the reniform to the costa; third submarginal and sinuous; costal margin with some pale points towards apex; one example has a deep black band filling up the inner space caused by the curve of the second line: hind wings with two indistinct pale discal lines, marked with brown on their inner sides towards the abdominal margin; both wings with black marginal lunules: underside uniform dark grey, pale points on costa of fore wings; black lunules on outer margins of both wings.

Expanse of wings $\frac{9}{10}$ inch.

Dawson, Queensland.

Allied to *R. imparata*, Walker, but that species has a dark brown band behind the collar.

Rhesala iada, nov.

♂ ♀. Head, thorax, and fore wings bright orange-yellow,

irrorated with red, the thickness of the irrorations giving a dark shade to the costa, and broadly so to the outer marginal border; a black dot at the end of cell; antemedial and post-medial transverse brown lines or thin bands, nearly erect but very sinuous, almost zigzag; the disc with three rows of very fine black points, not always visible to the naked eye: hind wings ochreous grey, outer margin broadly smeared with dark red-grey; an indistinct sinuous medial brownish line; cilia of both wings with the inner half orange, the outer half white, divided by a brown line: underside brownish grey, whitish on the hinder border of fore wings; a sinuous, indistinct, brownish discal line across both wings.

Expanse of wings $\frac{8}{10}$ inch.

Sarawak, Borneo.

Rather variable in shades of colour; some of my very long series are much paler and yellowish, nearly all the females are paler and more yellow than the males.

There is one example in the B. M. from Borneo unnamed.

Allied to *R. ochreipennis*, Moore, and *R. transversa*, Moore.

Rhesala levis, nov.

♂. Pectus white; top of head and fore part of thorax whitish, rest of thorax and fore wings shining pink-grey, with an ochreous tinge, with sparse grey irrorations; a black dot at the end of cell; two indistinct blackish transverse discal lines, with some black dots on them; blackish points also close on the veins to the outer margin; cilia ochreous grey, with pale ends: hind wings pale ochreous grey, darkest on the outer half; cilia pale pink, with white ends: underside of a uniform pale ochreous grey, shining, without any markings.

Expanse of wings 1 inch.

Coomoo, Queensland.

There is an example of this species unnamed in the B. M. from West Australia (Quadrifidæ, drawer 224).

[To be continued.]

LXIII.—*The Mechanism of the Protrusion of the Tongue of the Anura*.—Preliminary Note. By Prof. MARCUS HARTOG, M.A., D.Sc., F.L.S.*

FOR an explanation of the mechanism whereby the Anurous Batrachia protrude and reverse their tongue one may seek in

* Translated by the Author and slightly modified. From the 'Comptes Rendus de l'Académie des Sciences,' March 4, 1901.